

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Report No. 50-322/82-22

Docket No. 50-322

License No. CPPR-95 Priority -- Category B

Licensee: Long Island Lighting Company

175 East Old Country Road

Hicksville, New York 11801

Facility Name: Shoreham Nuclear Power Station

Inspection At: Shoreham, New York

Inspection Conducted: August 23-27, 1982

Inspectors: H. H. Nicholas
H. H. Nicholas, Reactor Inspector

10/4/82
date

Approved By: L. H. Bettenhausen
L. H. Bettenhausen, Ph.D., Chief,
Test Program Section

10/15/82
date

Inspection Summary:

Inspection on August 23-27, 1982 (Report No. 50-322/82-22)

Areas Inspected: Routine unannounced inspection of licensee's action on previous inspection findings; preoperational test program status including test program implementation, test procedure review, procedure verification, test witnessing, test results evaluation; fuel inspection, assembly, storage and handling; and, tours of the facility. The inspection involved 46 inspector-hours onsite by one NRC region-based inspector.

Results: No violations were identified.

DETAILS

1. Persons Contacted

- A. Christianson, Maintenance Foreman
- *T. Joos, Quality Assurance Engineer
- A. Muller, Quality Control Engineer
- D. Terry, Assistant Start-up Manager
- *R. Werner, Operating QA Engineer
- *E. Youngling, Start-up Manager

Stone and Webster Engineering Corporation

W. Matejek, Lead Advisory Engineer

General Electric Company

K. Nicholas, Lead Start-up Engineer

U.S. Nuclear Regulatory Commission

*J. Higgins, Senior Resident Inspector

*denotes those present at exit interview on August 27, 1982.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (50-322/82-11-02). Amplification for start-up manual and completed test packages to document resolved exceptions. In order to assure that exceptions remaining open after approval of Acceptance Tests/Preoperational Tests (AT/PTs) are tracked and closed out in a consistent method, the licensee has issued Start-up Instruction No. 9. In addition, revision 17 to the LILCO Start-up Manual also revised start-up form 8.7 to clearly provide spaces to list the Master Punch List items and test exception items that are to be closed with that particular 8.7 form. This unresolved item is closed.

3. Preoperational Test Program

References:

- SNPS Final Safety Analysis Report, Start-up Manual, Project Schedules,
- SNPS Safety Evaluation Report, NUREG-0420, and Supplement 1,
- SNPS Start-up Procedure Status Listing,
- Current SNPS Start-up Program Report,
- Regulatory Guide (RG) 1.68 - 1977, Initial Test Programs for Water Cooled Reactor Power Plants.

3.1 Test Program Status and Implementation

Scope:

The inspector met with the Start-up Group and other licensee representatives and discussed the status of construction; system turnovers; completed preoperational tests and remaining tests; test procedures approved for testing, awaiting results evaluation, review and approval; tests for which results have been evaluated and approved; and completed systems turned over to plant staff. Discussions also included the interface between the preoperational test program and the start-up test program. The inspector reviewed the monthly start-up report, the system turnover listing, project schedules, the start-up procedure status listing, the start-up program report, and plans of the day showing work in progress and testing of components and systems scheduled to start or be tested from day to day.

Findings:

As a result of these discussions, review of references and review of documents relative to test program status and implementation, no discrepancies were noted. The inspector had no further questions in this area.

3.2 Test Procedure Review and Verification

Scope:

The procedures listed below were reviewed in preparation for test witnessing. They were reviewed for technical and administrative adequacy and for verification that adequate testing is planned to satisfy regulatory guidance and licensee commitments.

- PT 106.001 Revision 0, Approved October 22, 1981, Control Rod Drive System,
- PT 107.001-3 Revision 3, Approved February 27, 1981, Makeup Demineralizer and Transfer System,
- PT 136.002-1 Revision 1, Approved March 20, 1980, Nuclear Boiler Steam Leak Detection,
- PT 307.001A-1 Revision 1, Approved March 30, 1982, EDG 101 Mechanical Test,
- PT 307.001C-1 Revision 1, Approved March 30, 1982, EDG 103 Mechanical Test,
- PT 307.003A-1 Revision 1, Approved July 13, 1982, EDG 101 Electrical Test,
- PT 307.003C-1 Revision 1, Approved July 13, 1982, EDG 103 Electrical Test,

- PT 307.004A Revision 0, Approved November 9, 1981, EDG Qualification,
- PT 307.004B Revision 0, Approved November 9, 1981, EDG Qualification,
- PT 307.004C Revision 0, Approved November 9, 1981, EDG Qualification,
- PT 309.001A Revision 0, Approved October 22, 1980, 4160 Volt Power Distribution,
- PT 309.001B Revision 0, Approved October 22, 1980, 4160 Volt Power Distribution,
- PT 309.001C Revision 0, Approved October 22, 1980, 4160 Volt Power Distribution,
- PT 310.002A Revision 0, Approved December 14, 1981, LPCI MG Sets,
- PT 310.002B Revision 0, Approved March 30, 1982, LPCI MG Sets,
- PT 314.001 Revision 0, Approved August 26, 1980, 120 VAC Power Distribution.

The procedures were examined for management review and approval, procedure format, test objectives, prerequisites, environmental conditions, references, initial conditions, test objectives met, performance verification, recording conduct of test, restoration of system to normal after test, and independent verification of initial steps or parameters.

Findings:

As a result of the examination, the inspector ascertained that the procedures are consistent with regulatory requirements, guidance and licensee commitments. No discrepancies were noted. The inspector had no further questions on these procedures.

3.3 Test Results Evaluation

Scope:

The 28 preoperational test procedures and acceptance test procedures listed in Attachment A were reviewed to ascertain whether uniform criteria are being applied for evaluating completed preoperational tests to assure their technical and administrative adequacy.

The inspector reviewed the test results and verification of licensee evaluation of test results by review of test changes, test exceptions, test deficiencies, "As-Run" copy of test procedure, QC inspection records, and verification that the test results have been approved.

Findings:

The following unresolved test exceptions were noted in this review:

<u>Procedure</u>	<u>Title</u>	<u>Exceptions</u>
PT 119.001-1	RCIC	001, 009, 013
PT 202.001-1	HPCI	003, 016, 023, 024
PT 312.001A-1	RPS MG Set	003
PT 601.001	SRM	004, 005
PT 702.005	Supp Pool PB	006
PT 704.001	RB Polar Crane	008
AT 102.001-1	Vac Priming	005, 007, 009, 010, 011
AT 126.001-2	TBCCW	005
AT 132.001-3	Hyps Injection	004
AT 317.001-1	120V Lighting	003
AT 308.001B	4160V Normal Bus	003, 004, 006
AT 308.001A	4160V Normal Bus	002, 003, 005
AT 192.001-2	Screenwash and Screens	002, 004, 005, 008, 009

These procedures will be examined on subsequent inspections for resolution of the listed exceptions and approval by the licensee. This is Unresolved Item (50-322/82-22-01).

3.4 Test WitnessingScope:

The inspector witnessed the running and testing of emergency diesel generators EDG 102 and EDG 103. The tests consisted of setting, fine tuning, and operating the electric controls for the governors on these EDG sets.

Findings:

Test witnessing by the inspector included observations of overall crew performance, documentation of test results and housekeeping and

cleanliness of EDG rooms. No discrepancies were noted. The inspector had no further questions in this area.

4. Fuel Inspection, Assembly, Storage and Handling

References:

- RG 1.68 - 1977, Initial Test Programs for Water Cooled Reactor Power Plants,
- SNPS New Fuel Handling Plan, Revision 1,
- SNPS SP 58.001.01 Revision 7, July 21, 1982, Receipt Inspection and Channeling of Unirradiated Fuel,
- SNPS SP 39.005.17 Revision 2, July 23, 1982, Reactor Building Elevation 175' Pre-Fire Plan,
- SNPS SP 35.001.02 Revision 1, July 22, 1982, Reactor Building Receiving Area Crane,
- SNPS SP 32.704.05 Revision 0, November 14, 1978, Spent Fuel Pool Jib Cranes,
- SNPS SP 37.002.01 Revision 1, July 23, 1982, Reactor Building Crane, Hoist, Sling and Cable,
- SNPS SP 35.001.01 Revision 1, July 21, 1982, Reactor Building Polar Crane,
- SNPS SP 32.704.08 Revision 4, April 15, 1982, Refueling Platform, Auxiliary Hoists and Fuel Grapple,
- CS 703.001 Revision 0, May 27, 1981, Fuel Handling and Vessel Servicing Equipment,
- PT 703.001 Revision 0, May 23, 1979, Fuel Handling and Vessel Servicing Equipment,
- PT 704.001 Revision 0, May 28, 1982, Reactor Building Polar Crane,
- ANSI N45.2.2 Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants.

Scope:

The inspector witnessed the receipt, inspection, assembly, and storage of unirradiated fuel from shipping container removal thru inspection of fuel bundle and channeling to storage in spent fuel pool racks.

The inspector reviewed the safety analysis report commitments, license requirements and procedural controls to identify specific inspection, security and storage requirements and to determine that the licensee's procedures are consistent with identified commitments. During the receipt, inspection, movement and storage of fuel, the inspector determined that each operation was conducted in a manner consistent with the license requirements, each operation was being performed under procedural control with approved procedures in use, and protection was provided to maintain the fuel in a clean condition.

Findings:

After review of referenced documents, discussions with licensee's representative and witnessing several evolutions of fuel receipt, inspection, assembly, movement, and storage, the inspector ascertained that the fuel was inspected, assembled and stored in preparation for fuel loading in accordance with Commission requirements, Safety Analysis Report commitments, license requirements, and procedural controls. No noncompliances were identified. The inspector had no further questions.

5. Unresolved Items

Unresolved items are matters about which more information is required to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item resulting from the inspection is discussed in Section 3.3.

6. Plant Tours

The inspector made several tours of the facility during the course of the inspection. The tours included containment, reactor building, turbine building, control structure, control room, battery rooms, diesel generator rooms, screenwell house, and EDG fuel fill and transfer rooms. The inspector observed work in progress, housekeeping, cleanliness controls and witnessed tests. No discrepancies were identified.

7. Exit Interview

At the conclusion of the site inspection on August 27, 1982, an exit meeting was conducted with the licensee's senior site representatives (denoted in Paragraph 1). The inspector summarized the scope and findings of the inspection. Previous inspections in this area also were discussed.

ATTACHMENT A

PREOPERATIONAL TEST PROCEDURES REVIEWED

PT 107.002 approved November 9, 1981. Demineralizer Water Transfer, test results reviewed, evaluated and approved January 11, 1982.

PT 118.001-1 approved January 25, 1982. RBCCW, test results reviewed, evaluated and approved August 13, 1982.

PT 119.001-1 approved April 12, 1982. RCIC, test results reviewed and evaluated August 12, 1982.

PT 133.001 approved November 14, 1978. Remote Shutdown Panel, test results reviewed, evaluated and approved August 13, 1982.

PT 135.002-1 approved May 10, 1982. Nuclear Boiler Steam Leak Detection, test results reviewed, evaluated and approved July 13, 1982.

PT 202.001-1 approved March 12, 1982. HPCI, test results reviewed and evaluated July 20, 1982.

PT 309.001A approved October 22, 1980, 4160V Power Distribution, test results reviewed, evaluated and approved August 13, 1982.

PT 309.001B approved October 22, 1980. 4160V Power Distribution, test results reviewed, evaluated and approved August 20, 1982.

PT 312.001A1 approved September 11, 1981. RPS MG Sets, test results reviewed and evaluated June 21, 1982.

PT 312.001B-1 approved September 11, 1981. RPS MG Sets, test results reviewed, evaluated and approved June 21, 1982.

PT 314.001 approved August 26, 1980. 120V Power Distribution, test results reviewed, evaluated and approved June 8, 1982.

PT 601.001 approved December 21, 1977. Source Range Monitoring, test results reviewed and evaluated June 21, 1982.

PT 602.001 approved March 15, 1978. Intermediate Range Monitor, test results reviewed, evaluated and approved June 21, 1982.

PT 702.005 approved July 13, 1982. Suppression Pool Pump Back, test results reviewed and evaluated August 14, 1982.

PT 704.001 approved May 28, 1982. RB Polar Crane, test results reviewed and evaluated July 20, 1982.

PT 711.001 approved August 26, 1980. High Cond Liquid Radwaste, test results reviewed evaluated and approved July 20, 1982.

PT 716.001 approved November 25, 1980. Recovery Sample Tank Liquid Radwaste, test results reviewed, evaluated and approved August 25, 1981.

AT 000.008 approved April 19, 1981. TBCCW HX Cathodic Protection, test results reviewed, evaluated and approved June 10, 1982.

AT 102.001-1 approved May 22, 1978. Vacuum Priming, test results reviewed and evaluated March 8, 1982.

AT 114.002-2 approved June 22, 1977. Generator Air Test, test results reviewed, evaluated and approved July 22, 1982.

AT 126.001-2 approved October 24, 1980. TBCCW, test results reviewed and evaluated May 26, 1982.

AT 130.001 approved March 4, 1982. Turbine Lube Oil and Turning Gear, test results reviewed, evaluated and approved June 22, 1982.

AT 132.001-2 approved November 13, 1981. Hypochlorination Injection, test results reviewed and evaluated June 8, 1982.

AT 419.002-2 approved September 30, 1980. TB Ventilation, test results reviewed, evaluated and approved May 26, 1982.

AT 317.001-1 approved March 10, 1982. 120 VAC Lighting, test results reviewed and evaluated August 2, 1982.

AT 310.001 approved September 2, 1981. 480V Normal Bus Distribution, test results reviewed and evaluated July 9, 1982.

AT 308.001A approved January 21, 1981. 4160V Normal Bus Distribution, test results reviewed and evaluated July 9, 1982.

AT 192.001-2 approved July 29, 1981. Screenwash and Traveling Screens, test results reviewed and evaluated October 9, 1981.